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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,399	01/06/2004	Jing Chung Chang	SO-0033 US NA	3588

23906 7590 01/29/2007

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EXAMINER	
BUTLER, PATRICK	
ART UNIT	**PAPER NUMBER**
1732	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/752,399	CHANG ET AL.	
	Examiner	Art Unit	
	Patrick Butler	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *06 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8,11,14,20,23,24,26,29,33,41,42,46-48 and 50-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8,11,14,20,23,24,26,29,33,41,42,46-48 and 50-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The Applicant's Amendments and Accompanying Remarks, filed 06 November 2006, have been entered and have been carefully considered. No Claims are new, Claims 8, 11, 14, 20, 23, 29, 33, 41, 46, and 47 are amended, Claims 1, 3, 4, 6, 7, 12, 13, 15-17, 22, 25, 27, 30-32, 34, 36-38, 43-45, 49, 55, and 56 canceled, and Claims 8, 11, 14, 20, 23, 24, 26, 29, 33, 41, 42, 46-48, and 50-54 are pending.

Although Applicant's Arguments are indicated as addressing Application Number 10/753,300, the Examiner assumes Applicant intended Application Number 10/752,399 in light of the content of Applicant's Arguments and Application Number 10/752,399 indicated on the transmittal form.

Despite these advances, the invention as currently claimed is not found to be patentable for reasons herein below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8, 11, 14, 20, 23, 24, 26, 29, 33, 41, 42, 46-48, and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al. (International Publication Number WO 96/00808) in view of Hwo et al. (US Patent Application Publication No. 2002/0130433 A1), Wandel et al. (US Patent Application Publication No.

2002/0132116 A1), Sun et al. (US Patent Application Publication No. 2002/0147298 A1), and Burton et al. (US Patent No. 5,804,115).

With respect to claim 47, Howell teaches extruding poly(trimethylene terephthalate) to make BCF yarn. Howell teaches extruding poly(trimethylene terephthalate) with an intrinsic viscosity in the range of 0.6 to 1.3 (see page 2, lines 31-36), which reads on the claimed range of about 0.95 to about 1.04. Howell teaches using poly(trimethylene terephthalate) with water content less than 50 ppm (see page 11, lines 4-8). The filaments are converged (see Figure 2, Ref. #12 - filaments approaching Ref. # 14) and cooled (see page 2, lines 37-39). Howell teaches that the yarn is drawn at least 800 m/min. (see page 3, lines 10-15), which reads on the claimed range of greater than 3,500 m/min. Howell teaches drawing at a ratio of 3 to 4.5 (see page 5, lines 2-4), which reads on the claimed range of 1.1-4.0. The filaments have a denier between 4 and 25 (see page 6, lines 3-7), which reads on the claimed range of filament denier greater than 10. The total denier, interpreted by the examiner to be synonymous with yarn denier, is between 700 and 5,000 (see page 6, lines 3-7), which reads on the claimed range of yarn denier greater than 500. Howell teaches bulking the drawn filaments (see page 3, lines 10-15), cooling the bulked continuous filaments (see Page 14, lines 32-34), intermingling prior to wind-up and winding up (see page 15, lines 27-30 and page 14, lines 35 and 36), which would make the apparatus used a wind-up machine.

Howell does not teach the specific molecular weight, a specific melt viscosity of the extruded poly(trimethylene terephthalate), the extent of speeds above 800 m/min, or using a single screw extruder.

Hwo teaches extruding poly(trimethylene terephthalate) with a draw speed of 2,450 to 10,000 m/min. (see page 2, paragraph 19), which reads on the claimed speed of greater than 3,500 m/min. It would have been obvious to combine Hwo's draw speed with Howell's process in order to maximize production speeds.

Hwo teaches using a single screw extruder to make poly(trimethylene terephthalate) (See [0025], [0038]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Hwo's single screw extruder in the poly(trimethylene terephthalate) extrusion process as taught by Howell in view of Hwo, Wandel, and Sun because the art, Hwo, recognizes the suitability for an intended purpose, which is to extrude poly(trimethylene terephthalate).

Howell in view of Hwo discloses the claimed invention except specific molecular weight and specific melt viscosity of the extruded poly(trimethylene terephthalate). However, it is inherent in melt extrusion of synthetic yarn spinning of polymers that a high melt viscosity such as 450 up to about 700 Pascal at 250°C and 48.65 is needed to effectively produce yarn, and it is inherent that polymers have high number average molecular weight of 29,000 to about 40,000. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a polymer with characteristics such as a number average molecular weight at least about

29,000 to about 40,000 and a melt viscosity of 450 Pascal up to about 700 at 250°C and 48.65 per second shear rate to effectively extrude filaments to create yarn with desired denier at a desired speed, since it has been held that discovering an optimum value of a resultant effective variable involves only routine skill in the art. In re Boesch, 205 USPQ 215.

Moreover, Wandel teaches an example of poly(trimethylene terephthalate) with a melt viscosity of 325 Pa s, which demonstrates that melt viscosity of about 450 up to about 700 Pascal at 250°C and 48.65 per second shear rate is taught. In view Wandel's specification, the melt viscosity of 325 Pa s was an example, and could be optimized for resultant effective variables such as processing speeds and denier. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Wandel's optimizeable melt viscosity with the process taught by Howell in view of Hwo in order to effectively practice extrusion of poly(trimethylene terephthalate) for filaments.

Moreover, utilizing proper melt viscosity is an optimized value of a resultant effective variable and involves only routine skill in the art, as previously described. Therefore, it would have been obvious to optimize the poly(trimethylene terephthalate) to have a melt viscosity of 350 up to about 700 Pascal at 250°C.

Moreover, Sun teaches using poly(trimethylene terephthalate) with a number average molecular weight of less than 40,000 (see Page 5-6, Paragraph 67), which reads on the claimed average molecular weight of 29,000 to about 40,000. It would have been obvious to one of ordinary skill in the art at the time the invention was made

to combine Sun's molecular weight with the process taught by Howell in view of Hwo and Wandel because when a polyester composition is melt spun into fibers or filaments, long chain length linear polymer molecules are desirable (see Page 6, paragraph 70).

Howell does not explicitly teach that the BCF fibers are cooled with a cooling drum.

Burton teaches that a cooling drum 30 is used to cool bulked fibers (see col. 8, lines 8-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Burton's cooling drum to cool the poly(trimethylene terephthalate) filaments as taught by Howell in view of Hwo, Wandel, and Sun because methods of cooling are interchangeable to the extent that a cooling drum or other methods of cooling can be used to cool poly(trimethylene terephthalate) filaments (see col. 8, lines 8-16)

With respect to Claim 8, the range of melt viscosity of about 450 up to about 700 Pascal at 250°C and 48.65 per second shear rate as previously described in the discussion of Howell et al. above reads on the claimed range of melt viscosity of 400-700 (Claim 6), 450-700 (Claim 7), and 500-700 (Claim 8).

With respect to Claim 11, Howell teaches filaments with a denier between 4 and 25 (see page 6, lines 3-7), which reads on the claimed range of filament denier of at least 15.

With respect to Claim 14, Howell teaches the total (yarn) denier between 700 and 5,000 (see page 6, lines 3-7), which reads on the claimed range of yarn denier at least 1000.

With respect to claim 20, Howell teaches coating the filaments with a spin finish (page 3, line 1), which reads on the claim language. The claim language allows for "optionally preintermingling the filaments", and because a process order is not claimed, it does not distinctly claim what intermingling is "pre-" to. The examiner interprets "pre-" to require intermingling be done before another portion the claimed process, which is taught by Howell by intermingling prior to wind-up (see page 15, lines 27-30).

With respect to claim 23, Howell teaches that the bulking of the drawn filaments is done in a 3-D manner (see page 3, lines 10-15).

With respect to claim 24, Howell teaches bulking the filaments by blowing and deforming with a hot-fluid jet bulking unit (see page 5, lines 5-12).

With respect to Claim 26, Howell teaches drawing at a ratio between 3 to 4.5 (see page 5, lines 2-4), which reads on the claimed range of 1.2 to about 3.0. Also, Hwo teaches drawing the filaments at a ratio of 0.7-3.0 (see page 2, paragraph 19), which reads on the claimed range of 1.2-3.0.

With respect to claim 29, Howell teaches extruding poly(trimethylene terephthalate) with an intrinsic viscosity in the range of 0.6 to 1.3 (see page 2, lines 31-36), which reads on the claimed range of about 0.98-1.04 (Claim 29).

With respect to Claim 33, Howell teaches using poly(trimethylene terephthalate) with water content less than 50 ppm (see page 11, lines 4-8), which reads on the claimed range of less than about 40 ppm (Claim 33).

With respect to Claim 34, Howell discloses the claimed invention except for having the entangling unit before the cooling unit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse the order of the units cooling and entangling, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

With respect to Claims 41 and 42, Howell teaches carpets made from poly(trimethylene terephthalate) yarns that are twisted, heat set, and then tufted into carpet (see page 7, lines 1-8), which reads on the claimed process (claim 41) of ply-twisting and heat-setting the filaments and claimed product (claim 42) of carpet made from the carpet.

With respect to Claim 46, Hwo teaches that temperature and dwell decrease moisture within the polymer (See [0026]). Hwo further teaches setting the dryer to 130 degrees C (See [0027]), which reads on the claimed range of 80-150 degrees C.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Hwo's temperature for attaining desired moisture ppm with Howell's extrusion process because Howell does not explicitly teach how to achieve poly(trimethylene terephthalate) with less than 50 ppm moisture content and

Hwo's method of drying the same polymer attains the desired moisture for extrusion process.

With respect to Claim 48, Howell teaches bulking the filaments by blowing and deforming with a hot-fluid jet bulking unit (texturing nozzle) (see page 3, lines 10-15; page 5, lines 5-12 and 19-22; Fig. 2, Ref. No. 24).

With respect to Claims 50 and 51, Hwo teaches extruding poly(trimethylene terephthalate) with a draw speed of 2,450 to 10,000 m/min. (see page 2, paragraph 19), as previously described. This draw speed range reads on the claimed speeds of greater than 4,000 m/min. (claim 50), and greater than 3500 m/min. up to less than 5,000 m/min. (claim 51).

With respect to Claim 52, Hwo teaches drawing the filaments at a ratio of 0.7-3.0 (see page 2, paragraph 19), which reads on the claimed range of 1.4-2.2.

With respect to claims 53 and 54, Howell teaches extruding poly(trimethylene terephthalate) with an intrinsic viscosity in the range of 0.6 to 1.3 (see page 2, lines 31-36), which reads on the claimed range of about 1.00-1.02 (Claim 53), and about 0.95-1.02 (Claim 54).

Claims 8, 11, 14, 20, 23, 24, 26, 29, 33, 41, 42, 46-48, and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (International Publication Number WO 99/19577), admitted prior art (Second Information Disclosure Statement, paragraph 2, 28 November 2005), and Hwo et al. (US Patent Application Publication No. 2002/0130433 A1).

Scott et al. incorporates Howell et al. (US Patent Number 5,645,782) by reference (see page 11, lines 16 and 17) in accordance with 31 CFR 1.57 (b).

With respect to claim 47, Howell teaches extruding poly(trimethylene terephthalate) to make BCF yarn. Howell teaches extruding poly(trimethylene terephthalate) with an intrinsic viscosity in the range of 0.6 to 1.3 (see col. 2, lines 1-6), which reads on the claimed range of about 0.95 to about 1.04, and with water content less than 50 ppm (col. 6, lines 37-41). The filaments are converged (see Figure 2, Ref. # 12 - filaments approaching Ref. # 14) and cooled (see col. 2, lines 7-9). Howell teaches drawing at a ratio of 3 to 4.5 (see col. 3, lines 22 and 23), which reads on the claimed range of 1.1-4.0. The filaments have a denier between 4 and 25 (see col. 3, lines 58-62), which reads on the claimed range of filament denier greater than 10. The total denier, interpreted by the examiner to be synonymous with yarn denier, is between 700 and 5,000 (see col. 3, lines 58-62), which reads on the claimed range of yarn denier greater than 500. Howell teaches bulking the drawn filaments (see col. 2, lines 19-24). Howell teaches cooling the bulked continuous filaments (see col. 2, lines 7-9). Howell teaches intermingling prior to wind-up and winding up (see col. 8, lines 62-65 and col. 8, lines 34 and 35).

Scott teaches drawing to a speed of 4,000-6,000 m/min (see page 12, lines 15-18), which reads on the claimed range of greater than 3,500 m/min. Scott teaches surrounding the new filaments with a hot tube (cooling drum) (see page 10, lines 4-6).

Scott lacks or does not expressly disclose polymers having the exact range of claimed intrinsic viscosity, number average molecular weight, and melt viscosity.

Admission discloses that polymers having the claimed intrinsic viscosity, number average molecular weight, and melt viscosity were commercially available from DuPont more than 1 year before the filing date of the instant application (Second Information Disclosure Statement, 28 November 2005, paragraph 2, lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize DuPont PTT commercially available polymer as taught by Admission in the process of manufacturing PTT yarn as taught by Scott because it would have been useful to use commercially available polymer in a process requiring PTT polymer, particularly given the polymers' having the same intrinsic viscosity required by Scott/Howell.

Scott does not explicitly teach using a single screw extruder.

Hwo teaches using a single screw extruder to make poly(trimethylene terephthalate) (See [0025], [0038]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Hwo's single screw extruder in the poly(trimethylene terephthalate) extrusion process as taught by Scott because the art, Hwo, recognizes the suitability for an intended purpose, which is to extrude poly(trimethylene terephthalate).

With respect to Claims 8 and 29, Admission discloses that polymers having the number average molecular weight and melt viscosity were commercially available from DuPont more than 1 year before the filing date of the instant application (Second Information Disclosure Statement, 28 November 2005, paragraph 2, lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize DuPont PTT commercially available polymer as taught by Admission in the process of manufacturing PTT yarn as taught by Scott because it would have been useful to use commercially available polymer in a process requiring PTT polymer, particularly given the polymers' having the same intrinsic viscosity required by Scott/Howell.

With respect to Claim 11, Howell teaches filaments with a denier between 4 and 25 (see col. 3, lines 58-62), which reads on the claimed range of filament denier of at least 15.

With respect to Claim 14, Howell teaches the total (yarn) denier between 700 and 5,000 (see col. 3, lines 58-62), which reads on the claimed range of yarn denier at least 1000.

With respect to claim 20, Howell teaches coating the filaments with a spin finish (col. 2, line 10), which reads on the claim language. The claim language allows for "optionally preintermingling the filaments", and because a process order is not claimed, it does not distinctly claim what intermingling is "pre-" to. The examiner interprets "pre-" to require intermingling be done before another portion the claimed process, which is taught by Howell by intermingling prior to wind-up (see col. 8, lines 62-65).

With respect to claim 23, Howell teaches that the bulking of the drawn filaments is done in a 3-D manner (see col. 3, lines 28-36).

With respect to claim 24, Howell teaches bulking the filaments by blowing and deforming with a hot-fluid jet bulking unit (see col. 3, lines 5-12).

With respect to Claim 26, Howell teaches drawing at a ratio between 3 to 4.5 (see col. 3, lines 22 and 23), which reads on the claimed range of 1.2 to about 3.0.

With respect to Claim 33, Howell teaches using poly(trimethylene terephthalate) with water content less than 50 ppm (col. 6, lines 37-41), which reads on the claimed range of less than about 40 ppm (Claim 33).

With respect to claim 41 and 42, Howell teaches carpets made from poly(trimethylene terephthalate) yarns that are twisted, heat set, and then tufted into carpet (see col. 4, lines 26-37), which reads on the claimed process (claim 41) of ply-twisting and heat-setting the filaments and claimed product (claim 42) of carpet made from the carpet.

With respect to Claim 46, Hwo teaches that temperature and dwell decrease moisture within the polymer (See [0026]). Hwo further teaches setting the dryer to 130 degrees C (See [0027]), which reads on the claimed range of 80-150 degrees C.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Hwo's temperature for attaining desired moisture ppm with Howell's extrusion process because Howell does not explicitly teach how to achieve poly(trimethylene terephthalate) with less than 50 ppm moisture content and Hwo's method of drying the same polymer attains the desired moisture for extrusion process.

With respect to Claim 48, Howell teaches bulking the filaments by blowing and deforming with a hot-fluid jet bulking unit (texturing nozzle) (see col. 2, lines 19-24; col. 3, lines 24-30 and 36-38; Fig. 2, Ref. No. 24).

With respect to Claims 50 and 51, Scott teaches drawing to a speed of 4,000-6,000 m/min (see page 12, lines 15-18). This draw speed range reads on the claimed speeds of greater than 4,000 m/min. (claim 50), and greater than 3500 m/min. up to less than 5,000 m/min. (claim 51).

With respect to Claim 52, Hwo teaches drawing the filaments at a ratio of 0.7-3.0 (see page 2, paragraph 19), which reads on the claimed range of 1.4-2.2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Hwo's drawing ratio with the process as taught by Scott in order to obtain desired crystallinity, orientation, tensile strength, and Young's modulus that accompany different drawing ratios (see Scott, page 11, lines 5-15).

With respect to claims 53 and 54, Admission discloses that polymers having the claimed intrinsic viscosity were commercially available from DuPont more than 1 year before the filing date of the instant application (Second Information Disclosure Statement, 28 November 2005, paragraph 2, lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize DuPont PTT commercially available polymer as taught by Admission in the process of manufacturing PTT yarn as taught by Scott because it would have been useful to use commercially available polymer in a process requiring PTT polymer, particularly given the polymers' having the same intrinsic viscosity required by Scott/Howell.

Response to Arguments

Applicant's arguments filed 06 November 2006 have been fully considered but they are not persuasive.

Applicant argues with respect to the 35 USC 103 rejections. Applicant's arguments appear to be on the grounds that:

1) Howell's one example does not provide for the relationship between the variables' ranges in the yarn making process. For instance, the one example only provides for only 1,990 m/min. To reorient the variables to attain the claimed speed in Claim 47 would require doing so without guidance from Howell and would yield a 50% increase. Howell fails to provide support for making the change.

2) Hwo teaches a different process than BCF—making partially oriented yarn (POY)—not bulk continuous filament (BCF).

3) Wandel and Sun do not teach using PTT in a BCF process.

4) Burton does not teach that PTT is a material suitable for use with a cooling drum.

5) The different aspects relied upon are not simplistic optimization of Howell. Instead, they are a combination that allows a significant increase over Howell.

6) Hindsight exclusively provides teachings for the rejection.

7) Since Scott refers to take-up of a spin-draw process, Scott is not actually referring to the draw speed.

8) Just because PTT could be made in the variety claimed, the teachings of process conditions would still be needed.

The Applicant's arguments are addressed as follows:

1) Motivation for the speed increase would be for basic manufacturing improvement—higher productivity and faster production.

1) Moreover, Howell is not exclusively relied upon for the higher drawing teachings. Specifically Scott and Hwo are relied upon separately as described above.

2) It is unclear how POY and BCF are mutually exclusive. POY does not refer to whether the yarn is bulked nor does it refer to whether it is continuous filaments. BCF requires some degree of bulking and filaments, which do not exclude POY. For instance, bulking of POY would yield BCF POY. Thus, the categories are not mutually exclusive.

3) More broadly, Wandel teaches proper PTT characteristics for yarn production, and the primary reference is relied upon for the process conditions. Similarly, Sun's molecular weight is chosen when a polyester composition is melt spun into fibers or filaments, long chain length linear polymer molecules are desirable (see Page 6, paragraph 70). Thus, Sun is applicable to melt spinning.

4) Burton is relied upon for its broad teaching of a suitable means for cooling of extruded fibers.

5) It would be expected that given more elements being optimized, more production would follow. Moreover, using the teachings of Scott and Hwo providing high production speeds as described above, the production would increase.

6) In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon

hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

7) Since the take-up is after the drawing, the drawing would be at least the speed of the take-up. Thus, if the speed of drawing is at least 4,000-6,000 m/min, it reads on the Claim limitation of greater than 3,500 m/min.

8) As relied upon, PTT of the variety claimed was available. However, this teaching is not relied on for processing conditions aside from its properties.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mo.-Th. 7:30 a.m. - 5 p.m. and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PB

Patrick Butler
Assistant Examiner
Art Unit 1732

CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER
1/22/07